A P P E N D I X

TRANSPARENCIES

APPENDIX

Transparencies

Control The Sun and The Wind . . . . . I, II, III

Caulking IV

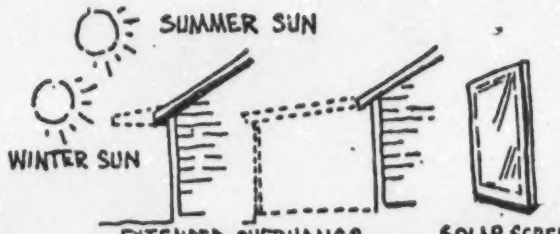
Weatherstripping VIII

How Thick Insulation Should Be XIII

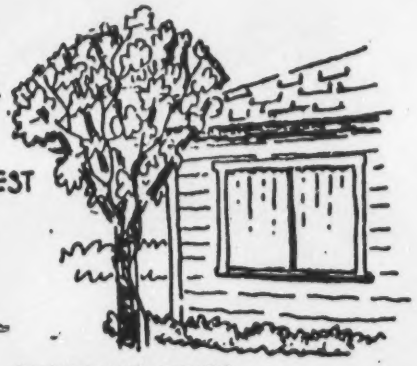
Where to Insulate XIV

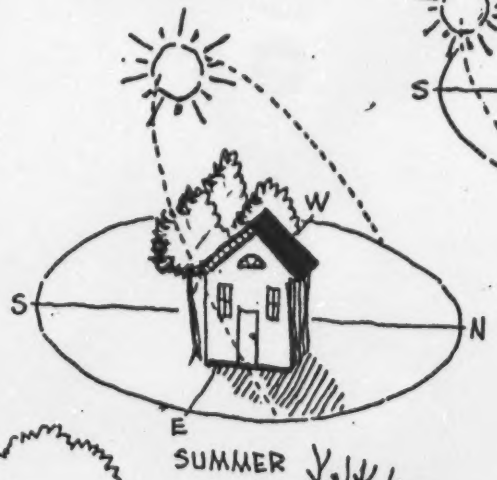
Roof Vents XV

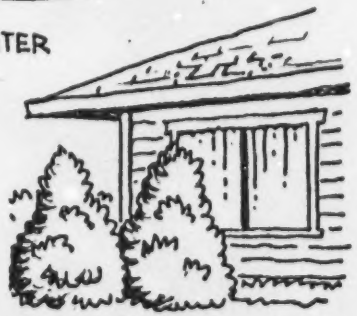
CONTROL THE SUN AND THE WIND

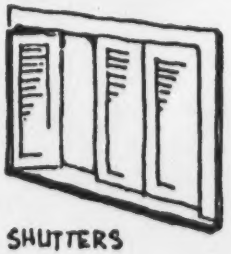


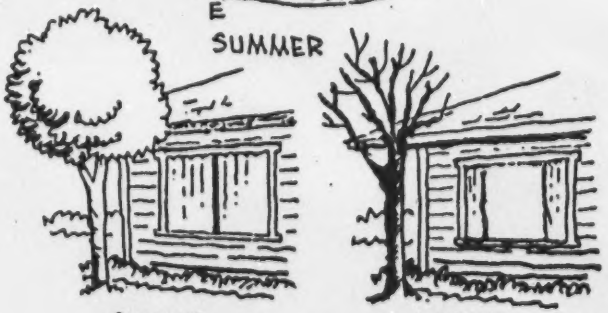
VARIOUS METHODS OF SHADING

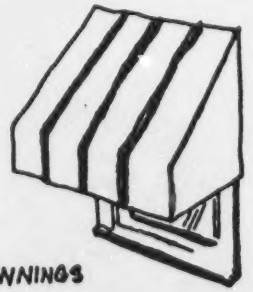






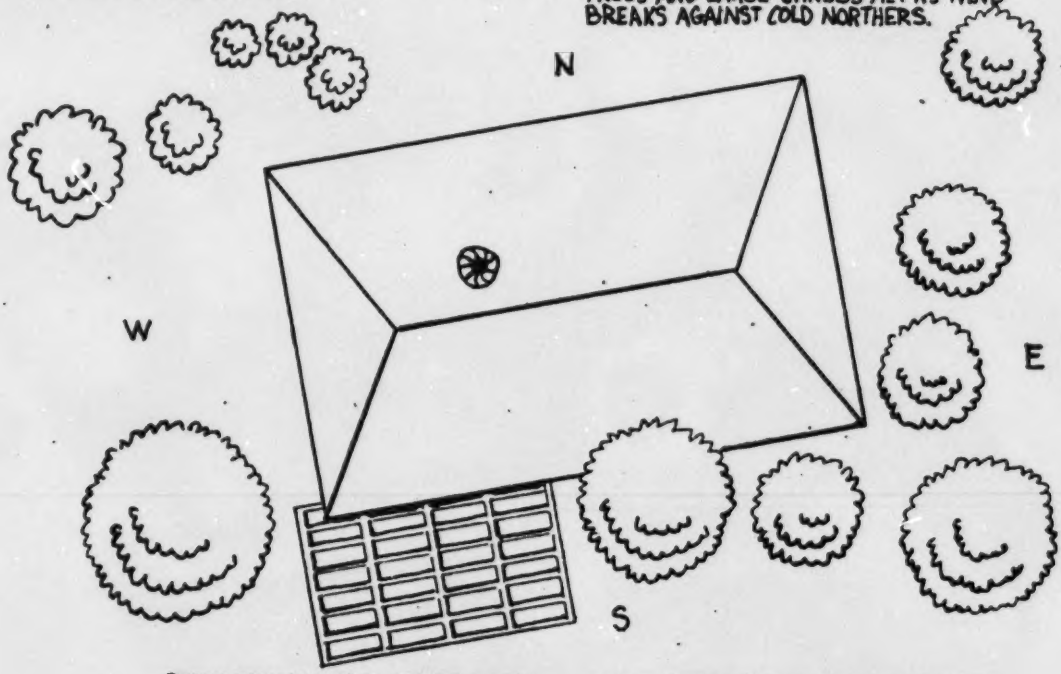






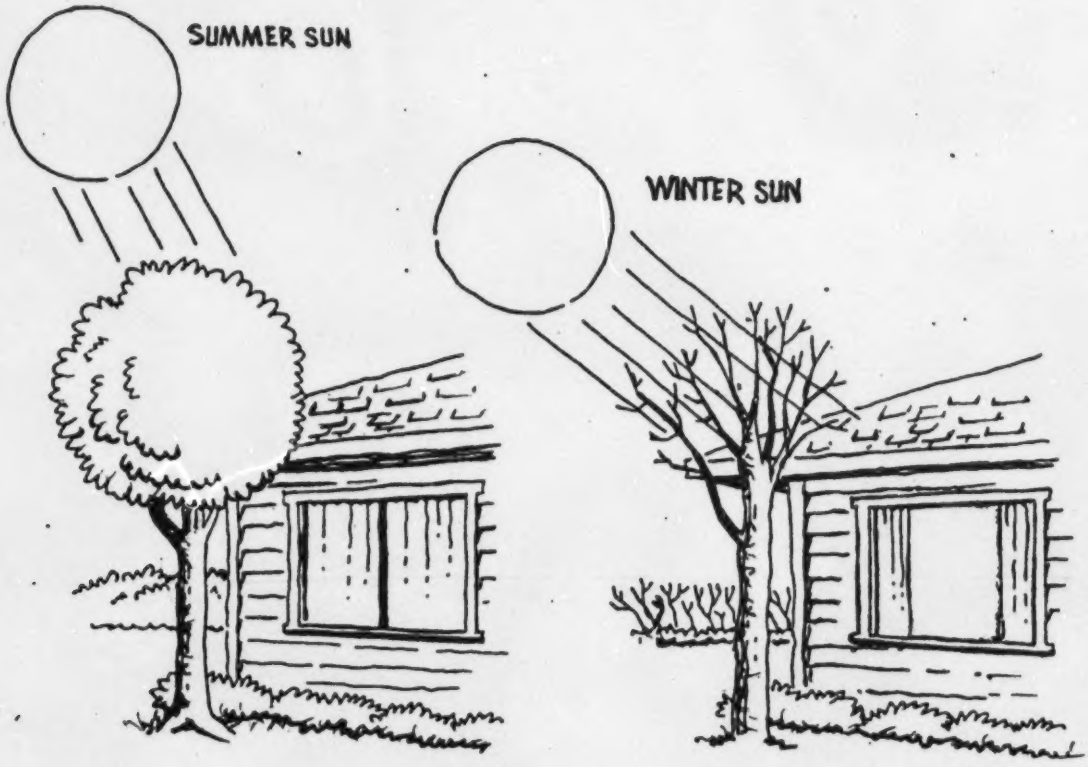
PLANT EVERGREEN TREES ON THE NORTH, NORTHEAST AND NORTHWEST. THEY WILL ALSO HELP BLOCK THE COLD WIND IN THE WINTER.

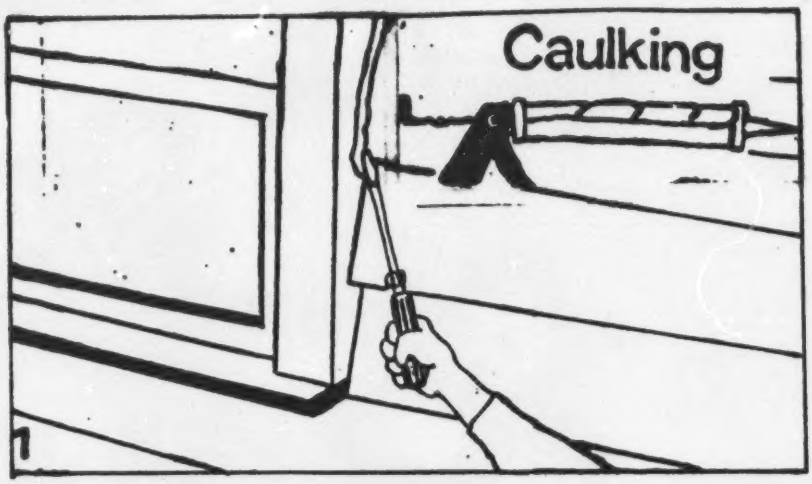
TREES AND LARGE SHRUBS ACT AS WIND BREAKS AGAINST COLD NORTHERS.



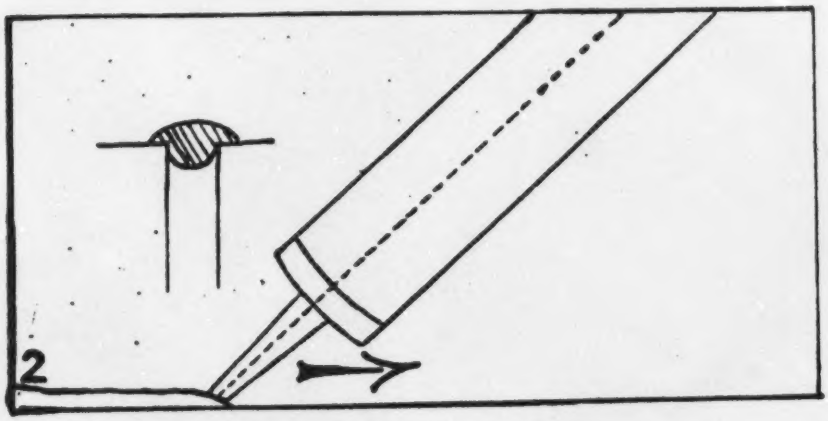
PORCH TRELLIS MAY BE PLANTED WITH DECIDUOUS VINE TO PROVIDE SHADED OUTDOOR AREA IN SUMMER AND SUNNY AREA IN WINTER.

LARGE DECIDUOUS TREES ON THE SOUTH, EAST AND WEST SHADE THE HOUSE FROM THE SUMMER SUN, DO NOT BLOCK THE WIND, AND LET THE WINTER SUNSHINE IN.


SUMMER SUN
WINTER SUN



Before applying caulking compound, clean area of paint build-up, dirt, or deteriorated caulk with solvent and putty knife or large screwdriver.



Drawing a good bead of caulk will take a little practice. First attempts may be a bit messy. Make sure the bead overlaps both sides for a tight seal.

A wide bead may be necessary to make sure caulk adheres to both sides.

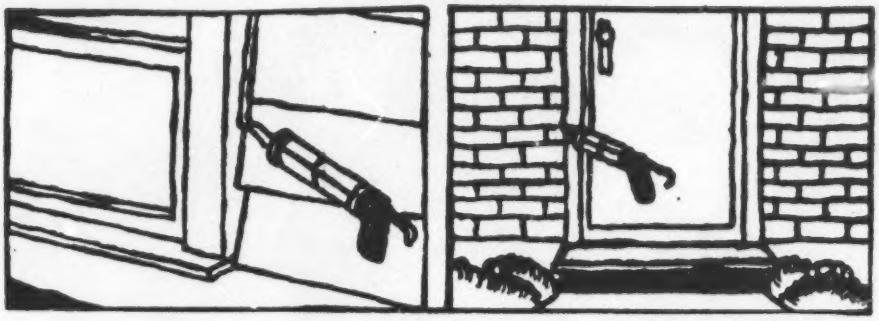
Fill extra wide cracks like those at the sills (where the house meets the foundation) with oakum, glass fiber insulation strips, etc.

In places where you can't quite fill the gaps, finish the job with caulk.

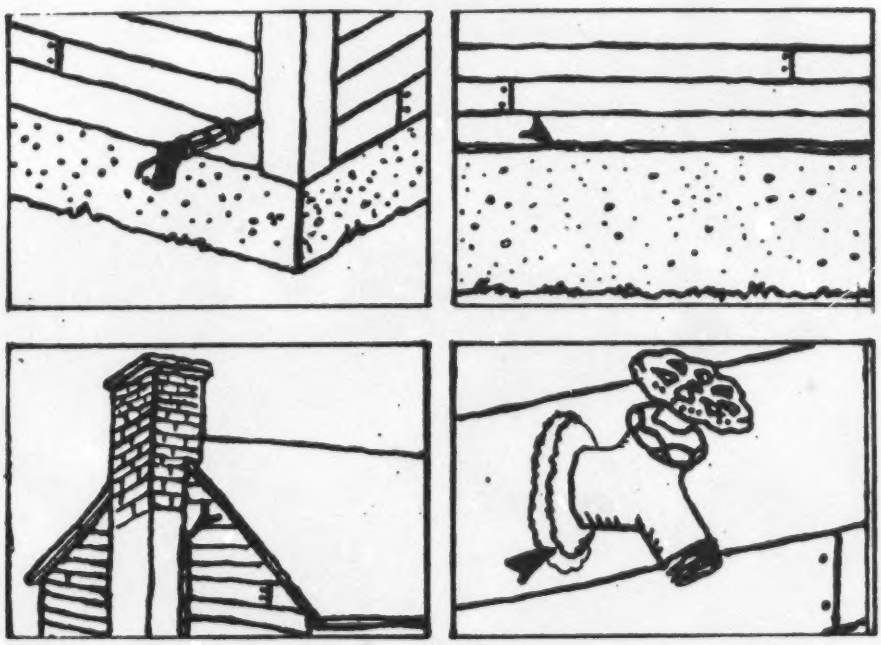
Caulking compound also comes in rope form. Unwind it and force it into cracks with your fingers. You can fill extra long cracks easily this way.

Installation:

Caulking should be applied outside around window and door frames. . .

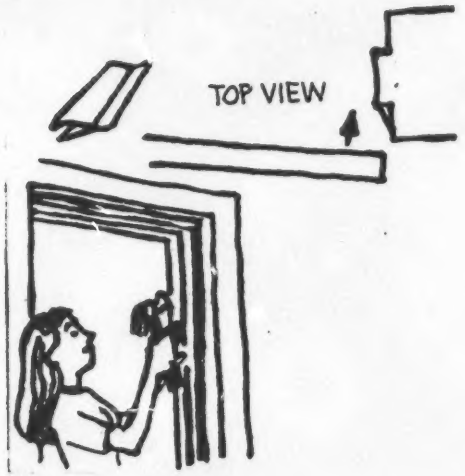


. . .and wherever else two different materials or parts of the house meet.

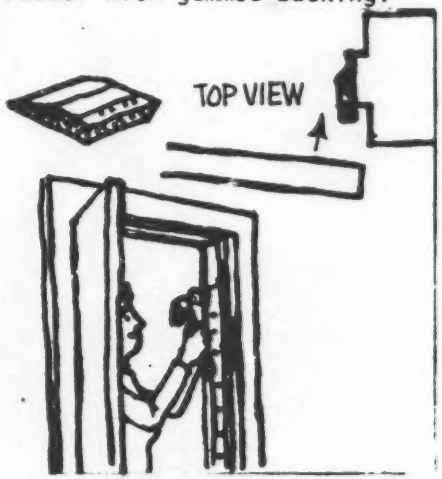


Caulking Guns and Arrows Show Where Caulking Compounds Should be Applied.

Spring metal:

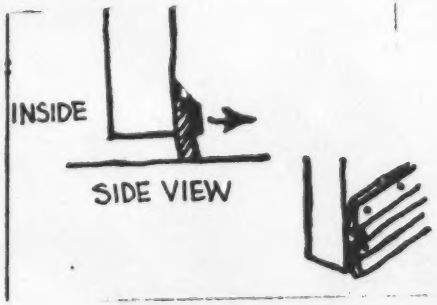


Foam rubber with gummed backing:

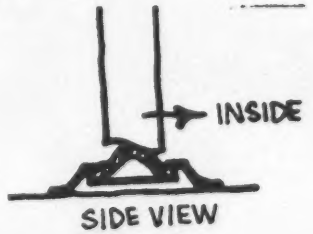


Rolled vinyl with aluminum channel backing:

Sweeps:

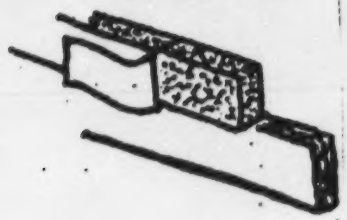


Vinyl bulb threshold:



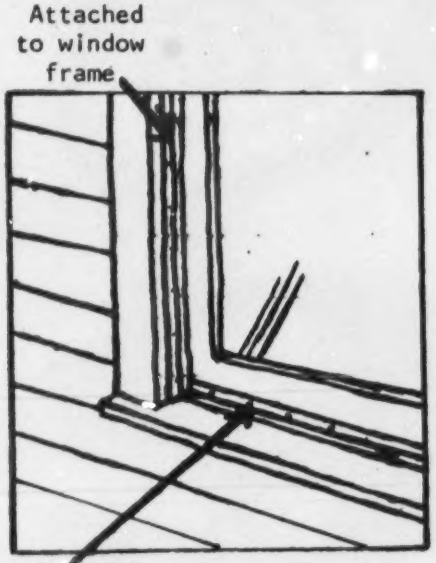
Different Kinds of Weatherstripping.

TYPES OF WEATHERSTRIPPING

Rolled Vinyl with rigid Metal Backing		5 years	Must make complete contact for proper seal.
Foam Rubber and Felt		1 - 2 years	Easy to apply. Short life span.
Thin Spring Metal		5 years and up	May lose some flexibility in time and therefore lose its sealing ability.

Weatherstripping should be checked every year for its condition. If installed correctly the first time, it will be effective for years.

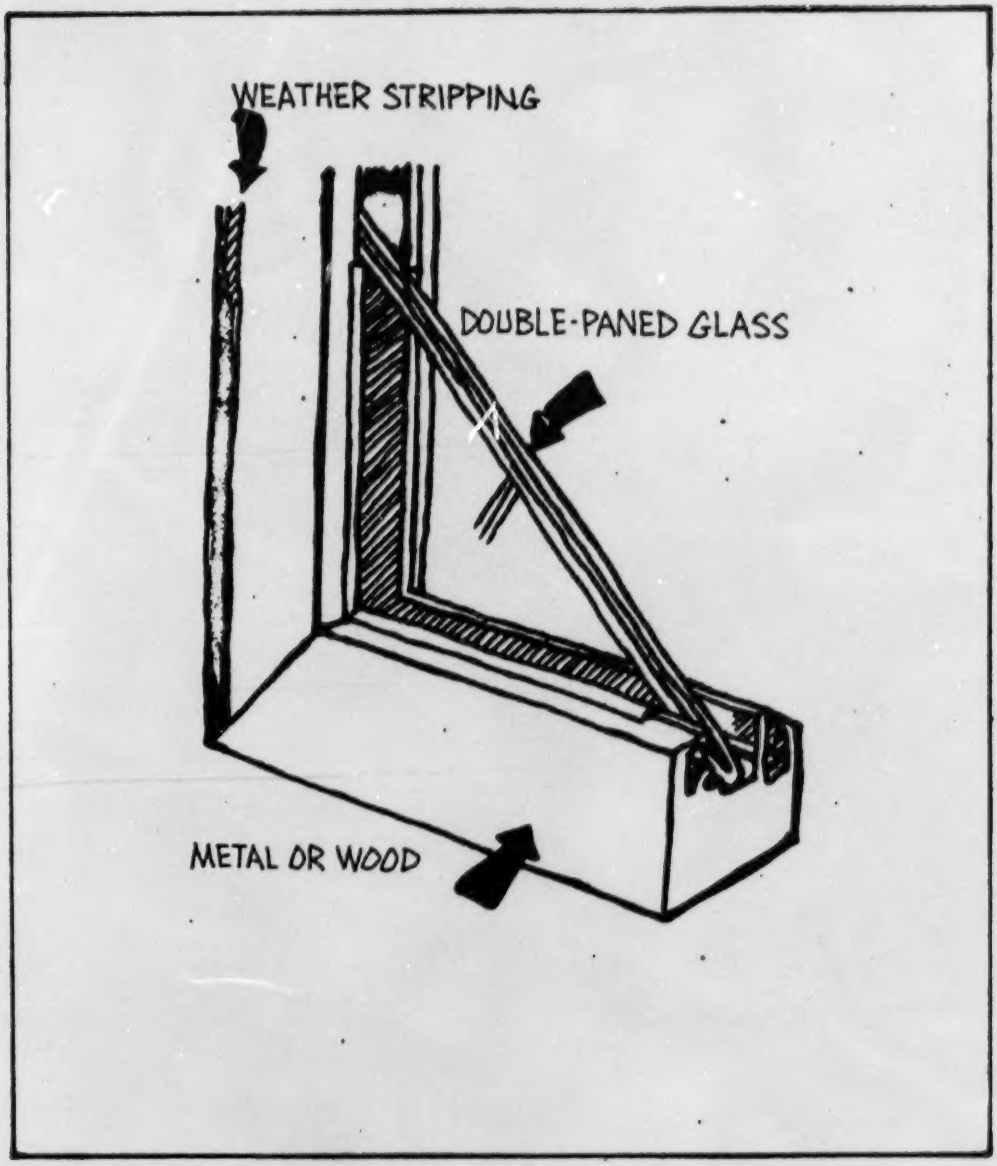
Look for other types of weatherstripping that may suit your needs, such as interlocking thresholds, doorsweeps, etc.

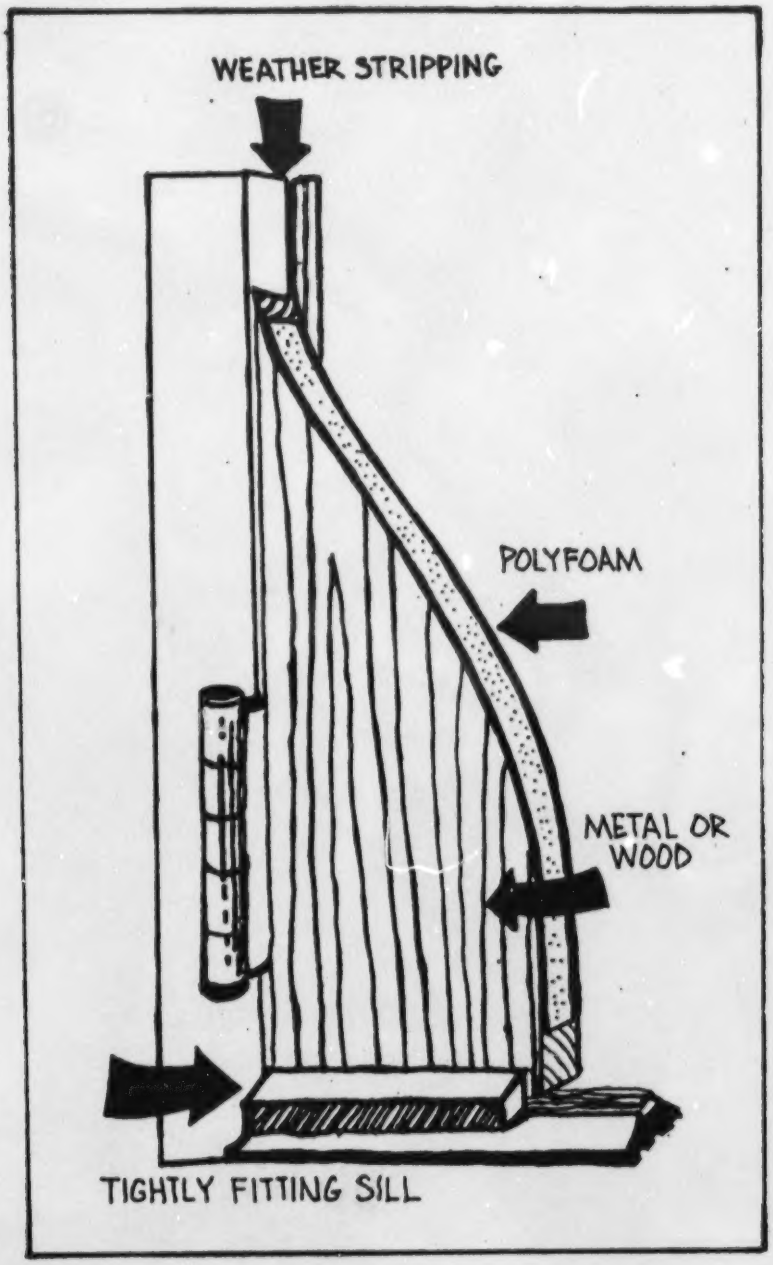


Rolled vinyl with aluminum channel backing

The base of the window
is the only place to
try to use foam strips

Foam rubber with gummed backing


WEATHER STRIPPING
DOUBLE-PANED GLASS
METAL OR WOOD


WEATHER STRIPPING
POLYFOAM
METAL OR WOOD
TIGHTLY FITTING SILL

HOW THICK YOUR INSULATION SHOULD BE:

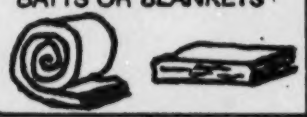
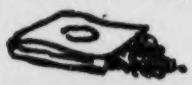
The R-Value, or Resistance Value, of insulation measures how well a material retards the flow of heat in or out of a building--the higher the R-Value, the more effective the thermal protection.

Always specify insulation on the basis of the desired R-Value and not in "inches," since different materials have different R-Values per inch of thickness.

Suggested R-Values for insulation installed in this climate area are as follows:

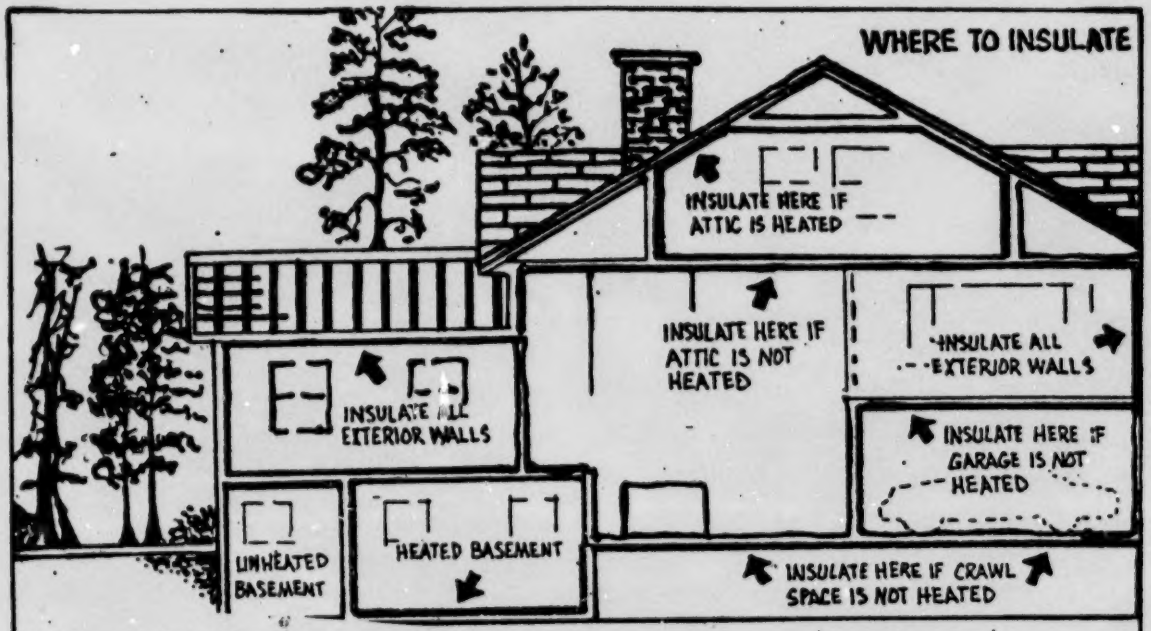
	Recommended Levels	Minimum Levels
ceilings and attics	R-26 to R-30	R-19
floors over garage, porch or open crawl space	R-19	R-11
enclosed crawl space	R-11	R-11
exterior walls	R-13 to R-18	R-11
perimeter of concrete slab on grade	R-7	R-0

TYPE OF INSULATION

	BATTS OR BLANKETS 		LOOSE FILL (POURED-IN) 			
	glass fiber	rock wool	glass fiber	rock wool	cellulosic fiber	
R-11	3½"-4"	3"	5"	4"	3"	R-11
R-19	6"-6½"	5¼"	8"-9"	6"-7"	5"	R-19
R-22	6½"	6"	10"	7"-8"	6"	R-22
R-30	9½"-10½"*	9"*	13"-14"	10"-11"	8"	R-30
R-38	12"-13"*	10½"*	17"-18"	13"-14"	10"-11"	R-38

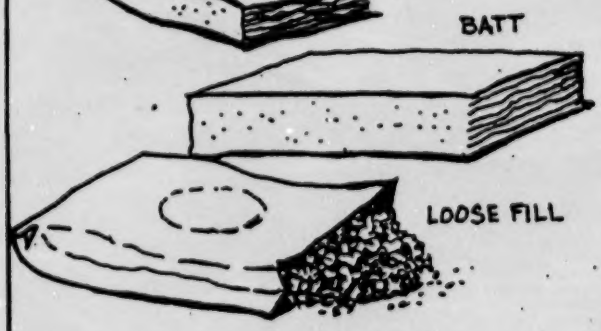
*two batts or blankets required.

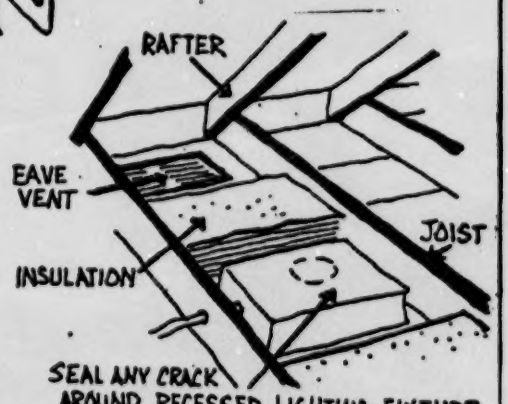
IN THE BANK...OR UP THE CHIMNEY

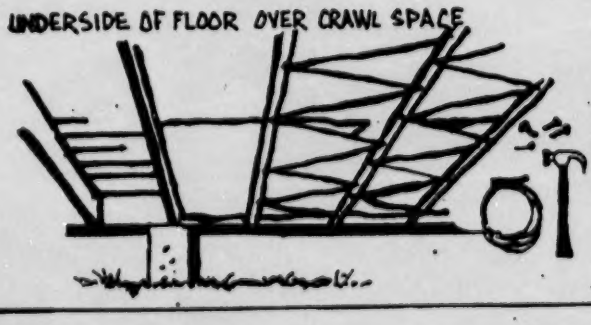

WHERE TO INSULATE
INSULATE HERE IF ATTIC IS HEATED
INSULATE HERE IF ATTIC IS NOT HEATED
INSULATE ALL EXTERIOR WALLS
INSULATE ALL EXTERIOR WALLS
INSULATE HERE IF GARAGE IS NOT HEATED
UNHEATED BASEMENT
HEATED BASEMENT
INSULATE HERE IF CRAWL SPACE IS NOT HEATED

INSULATION

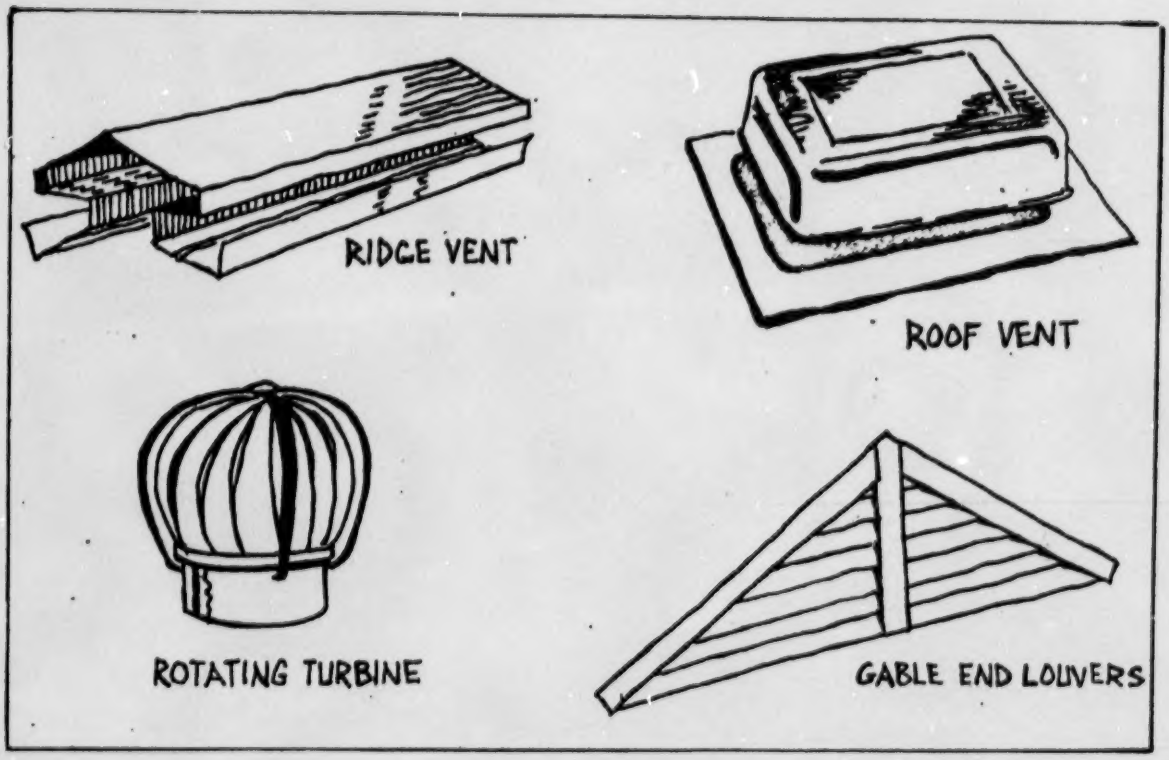
BLANKET


BATT
LOOSE FILL

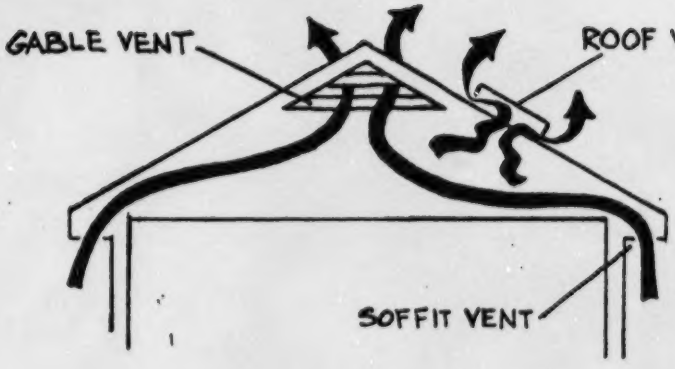

RAFTER
EAVE VENT
JOIST
INSULATION
SEAL ANY CRACK AROUND RECESSED LIGHTING FIXTURE


UNDERSIDE OF FLOOR OVER CRAWL SPACE

INSULATE BELOW WINDOWS ALSO



The Different Types of Roof Vents.



ATTIC VENTILATION HELPS LOWER SUMMER TEMPERATURES. ALSO ALLOWS MOISTURE VAPOR TO ESCAPE IN WINTER MINIMIZING CHANCE FOR CONDENSATION.

ATTIC VENTILATION

R E S O U R C E S

RESOURCES

American Gas Association - Educational Services Energy Report. Vol. 7, No. 1; Vol. 8, No. 1, No. 3, No. 4; Vol. 9, No. 1; Vol. 10, No. 1 and No. 2.

Award Winning Energy Education Activities. U. S. Department of Energy, Office of Education Business and Labor Affairs.

Energy and the Family. Gulf States Utilities Company, Inc.

Energy Conservation. Thomas Alva Edison Foundation.

Energy Conservation in Journal of Special Issues. Vol. 37, No. 2; 1981.

Allen, Rodney. Energy Education: Goals and Practices. Phi Delta Kappa Education Foundation.

The Energy Future Today; Grades 7, 8, and 9, Social Studies by U. S. Department of Energy, Office of Consumer Affairs, Contract, Number EC-79-C-01-6083, April, 1980.

"Energy: The Case for Conservation", Hayes, Denis in World Watch Paper, No. 4, January, 1976.

Fact Book on Non-Conventional Energy Technologies. Library of Congress, Washington, D.C.

Home Improvement Projects. Louisiana Power and Light Company, New Orleans.

The Household Energy Diet. Houston Lighting and Power Company.

Jackson, Janyth M., et. al. The K-6 of Energy. Gulf States Utilities and East Baton Rouge Parish Schools, June, 1980.

Pennsylvania's Energy Curriculum for the Secondary Grades - Industrial Arts, Pennsylvania Department of Education.

Project Retro-Tech: Home Weatherization. Federal Energy Administration.

Duckert, Joseph M. A Short Energy History of the United States.

Kmet, Stanley J. Jr., and William L. Rader. Teacher Resources for Energy Economics.

Tips for Energy Savers: U. S. Department of Energy Editorial Services Office Public Affairs.

Today's Technologies, Tomorrow's Alternatives. Electric Power Research Institute.

U. S. Department of Energy - Providing for Energy Efficiency in Homes and Small Buildings DE-IR-06065-1 pt. 1,2,3, and 5.

Bryant, Lloyd R. We Can Save Ourselves. Edison Electric Institute.

Nesbitt, William. World Energy: Will There be Enough in 2020? Decision Makers Bookshelf.